REMARKS

The Applicants request reconsideration of the rejection.

Claims 1-15 remain pending.

Claims 1-2, 5-7, 10-12, and 15 stand rejected under 35 U.S.C. §102(e) as being anticipated by Meehan et al., U.S. Patent Publication No. 2004/0177218 (Meehan). The rejection further relies on Patterson et al., "A Case for Redundant Arrays of Inexpensive Disks (RAID)" (Patterson) and Massiglia, "The RAID Book" (Massiglia). The Applicants traverse as follows.

Although the Reply filed November 1, 2006, argued numerous differences between the claimed invention and Meehan (incorporating Patterson and Massiglia), the current Office Action specifically addresses whether Meehan fails to teach a plurality of information processing units corresponding to each "other disk array system". Therefore, the prior remarks are repeated below, following a discussion of the claims as newly amended in this paper.

Claim 1 now recites that the second storage blocks are created by logically partitioning a data storage area of said plurality of second hard disk drives such that the second storage blocks have a block length equal to the block length of the first storage blocks. Claim 1 further recites that the first identifiers include first block numbers identifying the first storage blocks in corresponding ones of the "other disk array systems", the second identifiers include second block numbers identifying the second storage blocks in the "disk array system", and the first block numbers are identical to the second block numbers for corresponding first and second identifiers for the "disk array system" and the "other disk array systems".

By this feature of the invention, the correspondence established by the first and second identifiers, and the logical partitioning of the blocks of the different disk array systems into equal-length blocks, establishes a correspondence between the storage areas of the disk array systems on a block basis (in the preferred embodiment, on a "parity block basis"). For example, for the same parity block number, there is a correspondence between the parity blocks of the parity storage unit and the data storage units in the preferred embodiment. See the present specification, for example, between page 31 and page 33, with reference to Figs. 16A-16D. This correspondence allows data on the data storage units to be backed up to the parity storage unit even when the storage system is configured by storage units using storage volumes controlled by different control methods, such as CKD or FBA. Meehan does not disclose this structure or functionality, and the advantages of the novelty are not recognized and would not be obvious from the prior art.

Further, the ability to add disk array systems while still retaining the backup integrity of the overall system, is achieved by the present invention, but not taught by Meehan. See claims 3-4, 8-9, and 13-14.

In addition, as previously noted, the claims recite disk array systems in contrast with and to highlight differences between these claimed elements and the disclosure of Meehan. The claims further recite that each disk array system has a controller, and that all but one of the disk array systems is connected to a different respective information processing unit. The disk array system that is not recited to be connected to a corresponding information processing unit is the disk array system that has the "second storage controller".

The Applicants note that the disk array system having the second storage controller receives data from the other disk array systems which are connected to corresponding information processing units.

The disk array system having the second storage controller (hereinafter the "second disk array system") acts as a backup for the other disk array systems (hereinafter "the first disk array systems"). Meehan, on the other hand, discloses an expensive system for a single host, incorporating a multiple RAID system having multi-tiered RAID controllers. Whereas the present invention includes a disk array system that backs up plural disk array systems, Meehan does not disclose a corresponding structure. In particular, Meehan's secondary RAID controller 310, said to correspond to the "second disk array system", has a much greater role than the second disk array system. Further, if Meehan's secondary RAID controller 310 fails, the level 3 RAID controller 320 is cut off. However, the second disk array system (as claimed: the second disk array system or the disk array system (as opposed to the "other disk array systems")) performs its function of restoring lost data precisely at such times as one of the other disk array systems fails.

Thus, fundamentally, the claimed invention having a backup disk array system for data of plural disk array systems is different from Meehan's expensive multi-tiered RAID backup system.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

To the extent necessary, the Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to

the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.43732X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

Daniel J. Stanger
Registration No. 32,846

DJS/sdb
(703) 684-1120